



NX CAD Electrical Routing Wiring Harness Basic Course

Instructor-Led Online Training

Course Curriculum (Duration: Lectures: 20 Hrs. / Practicals: 20 Hrs.)

Chapter 1: UG NX Electrical Routing

1.1] Introduction to Electrical Routing

- a. Basics of Electrical harness
- b. Usage and functionality of electrical routing
- c. Technical aspects of Harness design
- d. Basic calculation of wire bundle diameter
- e. Selection of wires
- f. Calculation of wire min bend radius, bend to wire ratio
- g. Understanding the types of cables
- h. Voltage values and application of cables
- i. Usage of circuits
- j. Study of electrical wire diagrams
- k. Understand the wire connection types
- l. Connector id and specifications
- m. Understand the wiring design and flatten harness
- n. Form board diagram study
- o. Routing cables through cableways

1.2] Electrical Workbench

- a. Menus and Toolbars
- b. Part navigator
- c. Creating path segments
- d. Spline path
- e. Transform path
- f. Creating linear path
- g. Subdivide segment
- h. Space reservation/adding stock
- i. Editing line segment
- j. Edit stock
- k. Deleting routing paths or objects
- l. Editing the cables and adding points for smooth curves
- m. Enabling cable identities
- n. Create connection points for connector connection points
- o. Routing connection points
- p. Usage of Compass for spline path
- q. Graphic Properties
- r. Changing the Graphic Properties
- s. Hide/Show
- t. Help Documentation

1.3] Qualify Components

- a. Creating parts in modeling workbench
- b. Adding sketches/point
- c. Qualify the part for electrical workbench
- d. Adding ports and assigning unique Id's

1.4] Create the connection and component list

- a. Use a schematics package capable of generating the files
- b. Use the Electrical Connection or Component Wizards

1.5] Place qualified components (devices) into the assembly:

1.6] Create a new part for the wiring harness subassembly

1.20] Qualifying parts

1.21] Placing parts

1.22] Routing segments

Chapter 2: Electrical Routing operating of toolbars and commands

2.1] create a linear path

- a) create a simple linear path using
- b) Specify Points
- c) Axis Parallel

2.2] Spline Path

2.3] Heal Path

2.4] Delete Routing Objects

2.5] Subdividing segments

2.7] Adding Stock

2.8] Edit stock

2.9] Transform Path

2.10] Place Part

2.11] Remove Part

Chapter 3: Form board/ Harness drawings

3.1] Form board drawings

- a. Form board allows Routing Electrical users to create a manufacturing drawing for Routing Electrical harnesses.

3.2] Exercise and Workshops

IFS Academy, Pune

T: +91-20-2543 0338, M: +91-98228 49628, +91-99224 40102, E: training@ifsacademy.org,

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